

## CLAIMS

1. Bearing housing for accommodating a rotor shaft of a wind turbine, comprising:  
a flange (12) for connecting the bearing housing to a main frame (30) of the wind turbine ;  
the flange having a connecting surface to be attached to the main frame, whereby at least parts of the connecting surface, when seen from the top of the bearing housing, would be located below the rotor shaft (33).
2. Bearing housing according to claim 1, whereby  
the flange (12) has a connecting surface that can be averaged by a plane (41);  
and  
whereby the plane is inclined with respect to the rotor shaft axis (13) by an angle of at least 20°.
3. Bearing housing for accommodating a rotor shaft of a wind turbine, comprising:  
a flange for connecting the bearing housing (10) to a main frame (30) of the wind turbine;  
the flange having a connecting surface that can be averaged by a plane (41), whereby the plane is inclined with respect to the rotor shaft axis (13) by an angle of at least 20°.
4. Bearing housing according to claim 3, whereby  
at least parts of the connecting surface, when seen from the top of the bearing housing (10), would be located below the rotor shaft (33).
5. Bearing housing according to any of the preceding claims, whereby  
the connecting surface (51, 52) is arranged in one plane.

6. Bearing housing according to any of the preceding claims, whereby the bearing housing is essentially a single cast iron component (11).
7. Bearing housing according to any of the preceding claims, whereby the flange (12) comprises openings (53) for fastening means, and whereby at least in sections, these openings are arranged along a curvature.
8. Bearing housing according to any of the preceding claims, whereby the bearing housing is suitable for accommodating two bearings (21, 22) for holding the rotor shaft.
9. Bearing housing according to any of the preceding claims, whereby the two bearings are a locating bearing (21) and a floating bearing (22).
10. Bearing housing according to any of the preceding claims, whereby the flange has a thickness (d) below 120 mm
11. Bearing housing according to any of the preceding claims, whereby the connecting surface of the flange of the bearing housing is continuous.
12. Bearing housing according to any of the preceding claims, whereby the connecting surface of the flange of the bearing housing has an area of at least 1.5 m<sup>2</sup>.
13. Main frame of a wind turbine comprising:  
a flange (32) with a bearing housing compatible connecting surface for connecting the main frame (30) to a bearing housing (10) of the wind turbine, whereby  
at least parts of the bearing housing compatible connecting surface (33), when seen in a top view, would be located below a rotor shaft (33).

14. Main frame according to claim 15, whereby  
the flange has a bearing housing compatible connecting surface that can be averaged by a plane (41),  
whereby the plane is inclined with respect to the rotor shaft axis (13) by an angle of at least  $20^\circ$ .
15. Wind turbine comprising:  
a tower (100) defining a z-axis;  
a rotor (106);  
a rotor shaft (104) defining an x-axis, the axis of the rotor shaft being located at a y-position  $y_s$  and the rotor having a radius  $r$ ;  
a main frame (30);  
a bearing housing (10) for accommodating the rotor shaft, the bearing housing comprising a flange (12) for connecting the bearing housing to the main frame;  
wherein the flange comprises a connecting surface which is partly positioned at a z-position below the rotor shaft and at the same time at a y-position between  $y_s-r$  and  $y_s+r$ .
16. Wind turbine according to claim 17 whereby  
the bearing housing comprises the features of any of claims 1 to 12